BEFORE THE PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of Milwaukee Water Works, Milwaukee County, For Authority to Increase Water Rates

Docket No. 3720-WR-108

DIRECT TESTIMONY OF PATRICK PLANTON June 4, 2014

Please state your name and business address. 1 0. My name is Patrick Planton. My business address is 5395 North 118th Court, Milwaukee. 2 A. 3 Wisconsin, 53225. 4 Please state your occupation. Q. 5 I am the Water Practice Leader and a principal for the consulting engineering firm of Short A. 6 Elliott Hendrickson (SEH). I serve as a Director on the Board of Directors for SEH's 7 Design|Build subsidiary. I also serve as the Business Development Leader for SEH's 8 Wisconsin offices. 9 Please describe your educational and professional history. Q. 10 In 1982, I received a Bachelor of Science Degree in Civil and Environmental Engineering A. 11 from the University of Wisconsin-Madison. In 1995, I received a Masters Degree in 12 Business Administration from the University of Wisconsin-Oshkosh. I have also completed 13 several graduate level civil engineering courses at UW-Madison. 14 I have worked in the consulting engineering business for 31 years; in Chicago, 15 Illinois between 1983-1987, and in Wisconsin since August 1987. In 1983, I accepted an 16 engineering position with Sargent & Lundy Engineers. In this position, I was involved in completing structural engineering designs for the Byron and Braidwood nuclear power plant projects for Commonwealth Edison electric utility company.

In 1987, I accepted a position as a drinking water engineer at the Wisconsin-based consulting engineering company Donohue & Associates, Inc. In this position, I was directly involved in the engineering design and management of numerous drinking water projects, including groundwater supply, storage, treatment and distribution, utility master planning, hydraulic computer modeling, supervisory control and data acquisition (SCADA) systems, and utility rates and financial planning. I was promoted to Senior Project Manager of drinking water projects in 1995, and Assistant Water Department Manager in 2000. In 1993, Donohue was acquired by Waste Management Corporation and merged with Rust Engineering. In 1998, Rust Engineering was purchased by Tyco Corporation and merged with Earth Tech Inc. In the 15 years I worked for Donohue/Rust/Earth Tech, I worked directly for dozens of public and investor-owned water utilities throughout the United States.

In 2002, I accepted a Senior Water Project Manager position with SEH. SEH is headquartered in St. Paul, Minnesota, with 30 offices in 10 Midwestern and Rocky Mountain states. SEH is an ENR Top 150 consulting engineering company, employing 600 engineers, architects, planners and scientists. In 2007, I was named as the Water Practice Leader for SEH. In 2008, I was chosen as a Director for the Board of SEH's wholly-owned subsidiary SEH Design|Build, and was also named as a principal in the firm. In 2009, I was named as the manager of the SEH Appleton Office. In 2012 I moved to the St. Paul MN office to become the Water/Wastewater Practice Leader. In June 2013, I moved to Milwaukee and also currently serve in a business development role for SEH's Milwaukee Office. I currently

- 1 serve as Vice Chair on the Board of Trustees of the American Water Works Association – 2 Wisconsin Section. 3 O. What other qualifications and experience do you have that makes you qualified to offer 4 testimony in this case? 5 During my 15 years at Donohue/Rust/Earth Tech, and over the past 12 years at SEH, I have A. 6 been the recognized corporate expert in the field of water utility rates and financial planning. 7 I have completed many water utility rate and cost of service studies; prepared Wisconsin 8 PSC annual reports and rate case applications, as well as provided testimony at PSC rate case 9 public hearings on behalf of my municipal water utility clients. I have worked on water 10 utility rate projects in Wisconsin, Illinois, Minnesota, Indiana and Virginia. Most of my 11 water utility rate projects have been with Wisconsin public water utilities. The largest water 12 utility rate study I worked on was for the City of Chicago in 1999. I provided testimony at 13 the most recent Milwaukee Water Works contested case in 2010 on behalf of Milwaukee's 14 wholesale customers. Since 1994, I have given 16 presentations on water utility rates at state 15 and regional conferences in Wisconsin, Minnesota and Illinois. 16 0. Why are you testifying in this proceeding? Milwaukee Water Works' (MWW's) wholesale customers, Brown Deer, Butler, 17 Α. 18 Greendale, Menomonee Falls, Mequon, New Berlin, Shorewood, Wauwatosa, and West Allis, have authorized me to provide testimony on their behalf. 19 20 Q. Have you reviewed the revised cost of service study (COSS) (PSC REF#: 205539) and
- 23 Q. What is the purpose of your testimony?

Yes I have.

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demand study (PSC REF#: 204119) submitted by MWW in this proceeding?

1	A.	I will address the following issues raised by MWW's revised COSS (PSC REF#: 205539)
2		and demand study (PSC REF#: 204119):
3		(1) Change in the cost allocation methodology for transmission and distribution mains;
4		(2) Changes in customer demand peaking factors;
5		(3) Need for differential rate of return for wholesale customers; and
6		(4) Public fire protection cost allocations to wholesale customers.
7	Q.	What are your concerns regarding these issues?
8	A.	In reviewing MWW's COSS and demand study, it appears that MWW is proposing changes
9		that would shift a substantial amount of costs to MWW's existing wholesale customers.
10		These changes, and this shift in costs to wholesale customers, are not justified given that, as
11		Andrew Behm's testimony shows, the primary reason for this rate increase is MWW's
12		increased spending on facilities that primarily benefit retail customers.
13		Allocation of Transmission and Distribution Main Costs
14	Q.	How did MWW change its cost allocation methodology for transmission and
15		distribution mains?
16	A.	In MWW's cost of service study (PSC REF#: 205539), MWW changed its allocation of
17		capital costs for transmission and distribution mains from what the Commission approved in
18		2010. In the final cost of service study in MWW's 2010 rate case, Docket 3720-WR-107,
19		the Commission used actual values from MWW's records to assign costs between
20		transmission and distribution mains. (PSC REF#: 146073) MWW provided these values in
21		PSC REF#: 130647. In its cost of service study submitted in this case (PSC REF#: 205539),
22		however, MWW abandoned allocations based on its readily-available cost records and
23		instead relied on an assumption to allocate water main costs by length weighted by diameter.

1	Q.	Why is the allocation of costs between transmission and distribution mains important?
2	A.	Distribution mains are small mains providing service to individual MWW retail customers.
3		Wholesale communities, who own their own distribution systems to serve their own
4		individual retail customers, do not benefit from MWW's distribution system and are not
5		allocated distribution main costs. Transmission mains, however, are large diameter mains
6		assumed to serve all customers. Wholesale communities share in the cost of MWW's
7		transmission mains. Because the cost of distribution mains are not allocated to wholesale
8		communities and transmission mains are, the division of costs between distribution mains
9		and transmission mains has a significant impact on the calculated cost of serving wholesale
10		communities.
11	Q.	How are transmission and distribution mains categorized in MWW's system?
12	A.	For MWW's system, distribution mains are considered to be any pipe 12 inches in diameter
13		or less; transmission mains are considered to be any pipe greater than 12 inches in diameter.
14		(ExWholesale Customers-Planton-1; PSC REF#: 204308, T&D Main Analysis Tab). This
15		is not in dispute.
16	Q.	What is the effect of MWW's proposed change in the allocation of costs between
17		transmission and distribution mains in this case?
18	A.	As a result of this change, over \$27.6 million more is allocated to utility-financed
19		transmission rate base which is shared by wholesale customers.
20		MWW's historical transmission and distribution main cost are shown in MWW Plant
21		Account 343. Schedule 3 of the MWW COSS shows the 12/31/2013 balance of
22		Account 343 for utility-financed plant in service to be \$261,133,660, with 2014 Test Year

normal additions of \$5,686,581 and retir	rements of \$187,500,	and a test year	rate base
average balance of \$263,883,201. (PSC F	EF#: 205539, Schedo	ule 3).	

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Schedule 5 of the MWW COSS breaks down Account 343 into separate transmission main and distribution main accounts for utility-financed plant. (PSC REF# 205539, Schedule 5). Using the simplified estimating assumption based on the length and diameter of the different size MWW water mains (Ex.-Wholesale Customers-Planton-1; PSC REF#204308, T&D Main Analysis Tab), MWW allocated \$106,125,142 (40%) of the utility-financed cost in Account 343 to transmission mains and \$157,758,059 (60%) to distribution mains. (PSC REF# 205539, Schedule 5).

If Milwaukee's *actual* financial information on the dollar value of distribution and transmission main infrastructure had been used, \$78,506,650 or 29.75% (not 40%) of its utility-financed main cost would have been allocated to transmission mains, and \$185,376,551 or 70.25% (not 60%) would have been allocated to distribution mains. (Ex.-Wholesale Customers-Planton-1; PSC REF#204308, T&D Main Analysis Tab).

By using an estimated cost allocation approach, instead of its actual costs, MWW has shifted \$27.6 million in costs to transmission mains – the costs of which are shared by wholesale customers – even though MWW's own financial records show these costs are properly allocated to distribution mains and not recoverable from wholesale customers.

Q. Has the Commission approved the estimated cost allocation approach proposed by MWW before?

The estimated water main cost allocation approach was used in MWW's 2007 rate case, but was replaced in MWW's 2010 rate case when MWW's actual plant in service costs were provided to the PSC. PSC staff testified in the 2010 rate case (Docket 3720-WR-107) that

1	using actual transmission and distribution main asset values for water main cost allocation
2	"is an improvement over the 2007 MWW cost of service study which divided mains on the
3	basis of length times diameter." (PSC REF#: 138196, SD12.16).

- 4 Q. How do the wholesale customers propose allocating transmission and distribution main costs?
- 6 The value of mains should be allocated between transmission and distribution mains using A. 7 actual financial records when those records are available as they are in this case. Actual data existed in MWW's 2010 rate case and continues to be available for this docket. There is no 8 9 reason for the Commission to depart from the practice followed in MWW's 2010 contested 10 rate case of using actual data to allocate transmission vs. distribution main costs. Allocating 11 the construction costs of mains based on an estimating assumption shifts costs incurred to 12 serve only retail customers to wholesale communities. The Commission should reject 13 MWW's proposal to change to an approach that does not reflect asset cost reality and that 14 unreasonably shifts substantial costs to the wholesale customers.
- 15 Q. What will be the impact of using actual plant in service values for transmission and distribution mains?

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If actual transmission and distribution asset values are used in the COSS, I anticipate this would result in a significant reduction in the revenue requirement sought to be recovered from the wholesale customers. This is because the dollar value of the utility-financed plant and total plant serving the wholesale customers would be lower, and as a result the allocated service costs (depreciation, payment if lieu of taxes, and return on the net investment rate base [NIRB]) to the wholesale customers would all be lower. Based upon the cost of service analysis I have performed by modifying the COSS model provided to the wholesale

customers, I anticipate that this change would reduce the allocated cost of service to wholesale customers by over \$380,000 – and would correct one of the ways in which MWW has sought to inappropriately shift costs to wholesale customers.

Customer Class Peaking Factors

Q. Please discuss your concerns regarding MWW's proposed customer peaking factors.

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MWW claims that its recently completed demand study (PSC REF#: 204119) supports these changes, however, this demand study is highly flawed and should not be used to so drastically revise customer demand peaking factors for this rate case. The flaws in this demand study will be discussed further in my testimony and in the testimony of Eric Rothstein. Overall, it appears that MWW's demand study is little more than an attempt to justify shifting still more costs to its wholesale customers. MWW's proposed revision to customer demand ratios would have a very large impact on wholesale customers as they would get allocated a much greater proportion of extra capacity costs compared to other customer groups.

Q. Why is the selection of customer class peaking factors important?

The base-extra capacity model of cost of service assigns utility costs to base, maximum day, and maximum hour components. Calculating each customer class's responsibility for base costs is straightforward: each class's portion of annual consumption is available from customer billing information. Allocating maximum day and maximum hour costs to customer classes is more difficult, however, because responsibility for peak demand usually cannot be read directly from billing information. Without direct measurement of peak demand, normal cost of service practice estimates ratios of average consumption to extra

1	capacity for each class. Extra capacity is the volume by which maximum day and maximum
2	hour exceed average consumption.

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A customer class's extra capacity ratio affects the amount of maximum day and maximum hour costs assigned to the customer class. It also affects the allocation of costs to other classes. If, for example, MWW uses too low of demand ratios for one customer class, this will reduce the cost of service allocated to that class and increase the cost of service allocated to all other classes.

8 Q. How does MWW propose to establish customer class peaking factors in this rate case?

MWW proposes to establish customer class peaking factors based upon a demand study prepared for MWW by Trilogy Consulting, LLC (PSC REF#: 204119). This study proposes to increase demand ratios for wholesale communities and decrease demand ratios for retail customers. As a result, significant costs are shifted from retail customers to wholesale customers in MWW's proposed cost of service study.

Q. How much would MWW's proposed revision in customer demand peaking factorsaffect the wholesale customers?

Based upon the cost of service analysis I have performed by modifying the COSS model provided to the wholesale customers, I estimate that MWW's proposed change in customer peaking factors shifts approximately \$830,000 in the overall allocated cost of service to wholesale customers.

Q. How were customer peaking factors set in MWW's 2010 rate case?

For wholesale customers, max day demand factors were based on each wholesale customer's system data averaged over 3 years (2006-2008). Each wholesale customer's max hour factor was based on the customer's max day factor times 1.43. (PSC REF#: 138196, D12.17).

1		For retail customer classes, max day and max hour demand factors were based upon the
2		factors used in MWW's 2007 rate case.
3	Q.	How would the customer peaking factors for wholesale customers change under
4		MWW's current proposal?
5	A.	Instead of basing wholesale customers' peaking factors on three-years of system data as the
6		Commission did in 2010, MWW proposes to base wholesale customers' peaking factors on
7		inconsistent station metering data over a much shorter period of time that focuses heavily on
8		2012, an anomalously hot, dry year.
9	Q.	Doesn't MWW's demand study support this change in the demand factors?
10	A.	No, it doesn't. The data collected by MWW and included in the demand study is not
11		comprehensive, reliable, or representative. The selection of data and its analysis is skewed,
12		resulting in undue shifts of cost responsibilities from MWW's retail classes to the wholesale
13		customers.
14		For wholesale customers, MWW's collected data is not representative of the
15		wholesale customers' typical extra capacity usage. The study measured demand for some
16		wholesale customers from January 2012 through October 2013, and for others from March,
17		May, or June 2012 through October 2013. The study did not measure demand for two
18		wholesale customers, Shorewood and the Milwaukee County Institutions.
19		For wholesale customers, MWW focuses on 2012, an extremely and anomalously hot
20		dry year in southeastern Wisconsin with very high peak water usage. Over the 76 years of
21		weather data (1938-2014) from the National Climate Data Center for its Weather Station
22		USW14839 (Milwaukee Mitchell International Airport), the second quarter of 2012 was the

warmest over the past 76 years. July 2012 was the warmest single month of NCDC recorded

data for Milwaukee since 1938. (Ex.-Wholesale Customers-Planton-2). It was the 3rd warmest May; 3rd warmest June (and 3rd driest), the warmest July; and 18th warmest August since 1938. (Ex.-Wholesale Customers-Planton-3). The corresponding months in 2013 were much cooler compared to 2012. (Ex.-Wholesale Customers-Planton-4).

The data MWW collected on retail customers, however, *did not* include the peak months in 2012. Instead, the study measured retail customer demands for a month in the fall of 2012, a month in the spring of 2013, and a month in the summer of 2013. As Ex.-Wholesale Customers-Planton-4 shows, 2013 was much cooler than 2012. In addition, 2013 was an extremely rainy spring and fall; it was the wettest April recorded since 1938; 10th wettest May; and 11th wettest June, and 10th wettest October in 76 years. (Ex.-Wholesale Customers-Planton-5).

The problems with the inconsistent data collected in the study are aggravated by MWW's use of the data to develop *comparative* extra capacity demand ratios. As I mentioned above, while a customer class's extra capacity ratio affects the amount of maximum day and maximum hour costs assigned to the customer class, it also affects the allocation of costs to other classes. It is important, therefore, that extra capacity demand ratios be comparable across classes.

The demand factors proposed by MWW, which MWW claims are supported by the demand study, are not comparable across customer classes. It is <u>not</u> comparable to base extra capacity demand ratios for the wholesale customers on the historically dry summer of 2012, while basing extra capacity demand ratios for retail customers on extremely limited sampling that did not include the peak period of 2012. To make reasonable and credible

recommendations on all customer demand peaking factors, data from the same time periods is required.

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The end result of using these differing time periods to develop demand ratios is that MWW's proposed wholesale customers' demand factors increase significantly, while most retail demand factors decrease. The impact from these changes in demand factors is particularly pronounced insofar as cost allocations are made based on relative responsibilities for system demands. In the "zero sum game" of cost allocation, both changes unfairly disadvantage wholesale users to the benefit of retail users. MWW's demand study is so flawed that it cannot be relied upon to justify a change in demand factors.

How do you think the demand factors for MWW's wholesale customers should be set? In MWW's 2010 rate case, wholesale customers' max day demand factors were based on each wholesale customer's system data averaged over 3 years (2006-2008). Each wholesale customer's max hour factor was based on the customer's max day factor times 1.43. (PSC REF#: 138196, D12.17). I am recommending staying with this methodology, but averaging each wholesale customer's system data over 6 years (2007-2012), just like MWW's system data is averaged.

In MWW's 2010 rate case (Docket 3720-WR-107), the Commission averaged MWW's system demand over a six (6) year period in order to lessen the impact of extreme seasonal demand variations. (PSC REF#: 144469, p. 12). I propose averaging the wholesale customers' demand over 6 years in order to similarly lessen the impact of seasonal weather variations and to provide more credible average values that more reasonably reflect present and future customer maximum day and peak hour demands. This is particularly important because 2012 was an atypical weather year.

Each wholesale customer's max day demand factor can be calculated from information in its PSC Annual Report. Ex.-Wholesale Customers-Planton-6 shows the calculation of the max day demand factor for each wholesale customer other than Mequon and Shorewood for the period 2007 to 2012, and the six-year average for each customer. For Greendale, the information in its PSC Annual Report was adjusted for its maximum day demand based on testimony and an exhibit provided for the 2010 rate case (PSC REF#: 138196, R10.8; PSC REF#: 135041).

For Mequon, Shorewood, and the Milwaukee County Institutions, sufficient information is not available to perform the calculations. For that reason, I recommend using the same demand factors as the Commission used in 2010.

Q. What would the demand factors be for the wholesale customers under your proposal?

A. Under my proposal, which generally follows the Commission's methodology from the 2010 rate case, the resulting demand factors for the wholesale customers would be:

14	Wholesale Customers	Max Day Extra Capacity
15	Brown Deer	0.660
16	Butler	0.575
17	Greendale	1.164
18	Menomonee Falls	0.701
19	New Berlin	0.783
20	Wauwatosa	0.587
21	West Allis	0.449

See Ex.-Wholesale Customers-Planton-6.

Q. How do you think the demand factors for MWW's retail customers should be set?

1	A.	The Commission should retain the retail customer demand factors used in MWW's 2010 rate
2		case. As discussed above, the lack of sufficient reliable and comparative data from MWW
3		supports maintaining the retail demand factors previously approved by the Commission in
4		MWW's last rate. Other problems with the demand study's collection of data on and
5		analysis of retail demands are discussed in Eric Rothstein's testimony.
6		Differential Rate of Return
7	Q.	In MWW's last rate case, the Commission allowed MWW to charge a differential rate
8		of return. Should the Commission continue to approve a differential rate of return in
9		this case?
10	A.	No, the Commission should not continue to allow MWW to charge a higher rate of return to
11		its wholesale customers. Consistent with the Commission's recent decision in Kenosha's
12		contested rate case, (Docket 2820-WR-106), the Commission should reject MWW's request
13		for a higher rate of return from its wholesale customers. Charging the wholesale customers a
14		higher rate of return results in \$420,000 in increased costs to the wholesale customers.
15		Andrew Behm and Eric Rothstein provide further testimony on why MWW should not be
16		allowed to charge its wholesale customers a higher rate of return than its retail customers.
17		Public Fire Protection Costs
18	Q.	Do you agree with the testimony offered by Eric Rothstein, Andrew Behm and Chris
19		Kaempfer on the elimination of fire protection charges to the wholesale customers?
20	A.	I do. I agree that fire protection should not generally be charged to wholesale customers
21		because wholesale customers pay for the water used to fight fires in their communities while
22		customers in MWW's retail area do not. In addition, there are other operational reasons that

1	fire protection should not be charged to most of MWW's wholesale customers.	Chris
2	Kaempfer's testimony and my testimony address those operational reasons.	

3 Q. Should MWW public fire protection costs be allocated to the wholesale customers?

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Α.

No. For the reasons discussed in Eric Rothstein's and Andrew Behm's testimonies, the Commission should not allocate any public fire protection costs to the wholesale customers. In addition, the Commission should not allocate public fire protection costs to the wholesale customers for the reason the Commission did not allocate public fire protection charges to the City of Franklin in the 2013 Oak Creek contested rate case, Docket 4310-WR-104. (PSC REF#: 192349, pp. 5-6). The Commission did not allocate Oak Creek's major wholesale customer public fire protection costs in that case because the Commission found the wholesale customer did not receive public fire protection service from Oak Creek.

Similarly in this case, six of MWW's wholesale customers do not benefit from public fire protection service from MWW. Brown Deer, Butler, Greendale, Menomonee Falls, New Berlin, and Wauwatosa all do not receive nor benefit from the fire-fighting capacity of the MWW system. One MWW wholesale customer, West Allis, receives only partial public fire protection services from MWW. Like in the Oak Creek case, the Commission should recognize that MWW is not providing this service to these wholesale customers, and should not charge these wholesale customers for this service.

Q. Why don't these wholesale customers need public fire protection from MWW for their customers?

Each of these wholesale customers have designed their individual water supply systems to meet their maximum daily demand, and have designed their storage and distribution systems to meet their peak hourly demands. Their storage and supply systems have also been

designed to provide needed public fire protection throughout their communities. The way the majority of the wholesale customer water systems have been designed, they only require up to a maximum day flow supplied by and available from MWW over a 24 hour period. Their individual pumping and storage facilities are more than adequate to meet the peak hourly demands and public fire protection needs for the communities they serve.

In fact, based on the needed public fire protection flows identified in MWW's COSS (PSC REF#: 205539 Sch. 11A), the majority of the wholesale customers have more than sufficient water storage volumes to meet their peak hour demands plus their identified fire flow water volume. Ex.-Wholesale Customers-Planton-7 is a summary of the individual water storage needs of the listed seven wholesale customers. In every case noted in Ex.-Wholesale Customers-Planton-7, even for the extreme water demands of 2012, each wholesale customer had surplus water storage capacity available to meet its peak hour demand plus fire protection, including other water needs and emergencies, without needing to rely on MWW's supply above their 2012 maximum day supply rate. As listed in Ex.-Wholesale Customers-Planton-7, the total water storage needs of the wholesale customers in 2012 was approximately 12.4 million gallons. The seven listed wholesale customers have over 33.7 million gallons of capacity to store water for use to meet peak hour demands, the public fire protection needs of their communities, and still have over 20 million gallons of water storage capacity remaining.

- Q. What relief do the wholesale customers seek from the Commission related to the allocation of public fire protections charges?
- A. The Commission should recognize that the seven wholesale customers listed in Ex.Wholesale Customers-Planton-7 do not benefit from or receive service for public fire

1	protection for their water systems from MWW, with the exception of the East Pressure Zone
2	of the West Allis system. The wholesale customers have invested in storage facilities and
3	other infrastructure to be able to provide their own fire protection. The Commission should

- 4 recognize this investment and not allocate any of MWW's public fire protection costs to
- 5 these wholesale customers.
- 6 Q. Are the opinions you express in this testimony to a reasonable degree of professional
- 7 certainty?
- 8 A. Yes.
- 9 Q. Does this conclude your pre-filed testimony?
- 10 A. Yes.

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